FINAL GUIDELINES FOR CALCULATING THE NET COST OF THE UNIVERSAL SERVICE OBLIGATIONS FOR CABLE BAHAMAS LIMITED

GUIDELINES
ECS 12/2015

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Contents

1. INTRODUCTION

The Utilities Regulation and Competition Authority (URCA) hereby issues the "Final Guidelines for Calculating the Net Cost of the Universal Service Obligations for Cable Bahamas Limited" [ECS 12/2015] (CBL NAC Guidelines). These Guidelines serve as a means to provide guidance to Cable Bahamas Limited (CBL) on the approach that CBL is required to adopt in its calculation of the net cost associated with the provision of its designated universal service obligations (USO) under section 119(1) and Schedule 5 of the Communications Act, 2009 (Comms Act).[1]

These Guidelines were preceded by URCA's Statement of Results and Final Decision "Framework for the Clarification and Implementation of Existing Universal Service Obligations (USO) under Section 119 and Schedule 5 of the Communications Act 2009" [ECS 01/2013][2] and the consultation document "Guidelines for Calculating the Net Cost of the Universal Service Obligations for Cable Bahamas Limited" [ECS 16/2014].[3]

The focus of these Guidelines rests on the quantification of the net cost of the USO, which is the first of several steps, detailed herein which CBL must carry out before URCA can consider whether the estimated net cost of the USO constitutes an unfair financial burden on CBL and whether compensation from a Universal Service Fund (USF) established under section 44(1) of the Comms Act is warranted. CBL is expected to make its own assessment of the unfairness of the burden and present it to URCA as part of its application for compensation. The determination of whether an unfair financial burden exists rests with URCA.

1.1 Universal Service Obligations

With respect to universal service obligations, CBL has been entrusted in section 119(1) and Schedule 5 of the Comms Act with the provision of:

- affordable basic television (six channels inclusive of ZNS-TV and the Parliamentary channel) to all populated areas; and
- internet at a nationally uniform and affordable tariff to all populated areas and free of charge to specified institutions.

For the avoidance of doubt, the requirement to provide nationwide television and internet services under the USO excludes the provision of such services to inhabitants of privately owned islands. CBL is free to choose whether it shall serve private islands and how it shall price its services to those customers.

[1] http://www.urcabahamas.bs/download/088554800.pdf
[2] http://www.urcabahamas.bs/download/012155400.pdf
[3] http://www.urcabahamas.bs/download/071879800.pdf

1.1.1 CBL's implementation plan

The operational definitions of the USO will be set out in CBL's implementation plan. URCA recognises that a net cost exercise can only be carried out when there is clarity in relation to the scope of the USO.

In particular, URCA will base the requirement for CBL to provide USO services in particular areas on CBL's current network status and its implementation plan, with the intent that URCA expects the full range of USO services to be made available to a wider population and additional islands over time. URCA, subject to consultation with CBL, will establish or specify the conditions under which an "unserved" population today can expect to have access to USO services in the future, the time period necessary for CBL to carry out the necessary technology-neutral national rollout in all populated areas, whether by upgrades to its network or otherwise. The implementation plan will also include the operational definition of populated area for the purposes of the USO obligations. URCA is aware that, at this time, CBL provides different levels of services to different islands, which are classified as either:

1) islands where CBL's cable network supports both TV and broadband; or
2) islands where CBL's cable network supports TV only[4]; or
3) islands where CBL has no cable network deployed but provides terrestrial TV.

1.2 Overview of Methodology for USO Net Cost Calculations

URCA may, pursuant to Section 44(3) of the Comms Act, apply the universal service fund (USF) to the installation and maintenance of networks and the provision of universal services in areas where the "gross avoidable cost of providing the universal services exceeds the revenue derived from those services".

1.2.1 Methodology documented in these guidelines

As noted by URCA in Section 4.1 of its consultation document "Framework for the Clarification and Implementation of Existing Universal Service Obligations (USO) under Section 119 and Schedule 5 of the Communications Act 2009" [ECS 12/2012][5], calculation of the net avoidable cost (NAC) is the widely accepted approach to measuring the loss in profits (i.e., net cost) incurred by the universal service provider (USP) due to it having to meet the USO. This approach is an operational method that seeks to measure the cost incurred in meeting a USO by comparing the profits realised by the USP with and without the USO. This approach is typically used in the electronic communications and postal sectors globally.

[4] On the islands of Andros, Bimini, Berry Islands, Great Exuma, Great Inagua, San Salvador and Long Island, CBL only provides cable television services via unidirectional CATV facilities.

[5] http://www.urcabahamas.bs/download/013910600.pdf

Under the NAC approach, the overall net cost of the USO to CBL would be made up of:

- the net cost of providing USO services to uneconomic island;
- the net cost of providing USO services to uneconomic customers in economic islands; and
- the net cost of offering a USO broadband internet service free of charge to designated specified institutions.

In calculating the net cost of providing USO services to an uneconomic island, the NAC approach would:

- identify the islands on which the USO services generate less revenues than their incremental costs thereby rendering them loss making; and
- aggregate the net losses of the loss making islands as identified above.

As set out in Section 1.2.2 below, any net cost calculation should be done at the level of individual islands. The islands on which CBL incurs a net loss from the provision of USO services will be deemed "uneconomic islands" and those that are profitable will be deemed "economic islands". As the assessment is concluded *ex post*, a net cost calculation can only be carried out for islands that are currently provided with USO services by CBL.

In addition, there may be customers on economic islands who are inordinately expensive to serve and, hence, unprofitable to serve even if they generate revenue per subscriber that is similar to the national average. For the purposes of these Guidelines, those customers will be called "uneconomic customers on economic islands". The net cost associated with the provision of USO services to those customers, if such a cost exists, will be included in the overall net cost of the USO.

The third element of the potential net cost of CBL's USO arises from CBL's requirement to provide an internet services free of charge to specified institutions.[6] This special tariff obligation automatically generates a net cost that should be included in the overall net cost of the USO.

Therefore, the total direct net cost to CBL of meeting its USO would be comprised of the sum of the:

- incremental cost minus foregone revenues of serving customers of USO services on uneconomic islands;
- incremental cost minus foregone revenues of serving uneconomic customers who subscribe to at least one USO service on economic islands; and
- revenue foregone in serving specified institutions on both economic and uneconomic islands as a result of CBL meeting its USO.

Any intangible benefits associated with the provision of the USO shall be deducted from the direct net cost of the USO. Four intangible benefits identified in Section 4.25 of ECS 01/2013

[6] Specified Institutions are defined at Schedule 5 of the Comms Act.

(i.e., brand recognition, ubiquity, life cycle benefits, and marketing) should be carefully considered by CBL in calculating the net cost of the USO.

The estimate of the overall net cost of the USO and all supporting evidence and assumptions are to be submitted to URCA by CBL as part of any application for compensation. URCA will review the robustness of this estimate and establish whether the estimate of the net cost of the USO constitutes an unfair financial burden upon CBL. Where URCA concludes that an unfair financial burden exists, such a finding is expected to activate the USF.

1.2.2 Critical elements of a net cost calculation

The net cost calculation rests on three critical elements:

1) Identification of avoidable activities and network components absent the USO

The net cost of the USO will be driven by those costs that CBL would avoid and the revenues that it would forego in the event that it ceased to provide USO services.

CBL is therefore required to identify any network components and activities that would not be required if CBL terminated the provision of its USO services on a given island. This will establish whether a cost item is truly avoidable as CBL continues to serve customers who do not subscribe to USO services.

2) Valuation of avoidable costs

Having completed the assessment above and identified those cost items that would be avoidable if CBL was not required to provide its USO services, CBL would then be required to determine the value of those avoidable costs. The best practice approach for such assessment would ideally estimate the level of avoidable costs a new operator would save, that is, the costs would reflect the latest and most efficient technology and an optimal network configuration. This is often referred to as “forward looking costs”. URCA, in Section 4.21 of ECS 01/2013, agreed that the USP should have the flexibility to build a bottom-up cost model in order to derive estimates of long run incremental costs of activities or of products.

In the absence of the requisite information to build a bottom-up cost model, URCA is of the view that CBL should use the actual costs of providing the USO with adjustments made for efficiency as appropriate. Such adjustment may be necessary given that CBL’s cost accounting records are on a historical cost accounting basis (HCA).

URCA recognises that costs valued on a HCA basis do not depict the costs of a new entrant as best practice would require. Costs valued on a current cost accounting (CCA) basis are recognised as being superior in that they depict the costs a new operator would face entering the market. CCA is therefore considered superior for evaluations of the true avoidable cost of the USO. However, until URCA considers revision to the costing methodology for separated accounts, URCA accepts that the net cost calculation shall be determined on a HCA basis.

That acceptance notwithstanding, these Guidelines can be applied using either the HCA or CCA approach. At this stage, URCA accepts that costs will be valued on a historical cost basis for the purpose of calculating the net cost of the USO.[7]

3) Cost data broken down by area

Another critical element to CBL's calculation of the net cost of its USO is an understanding of how an activity/network component varies under different geo-demographic conditions. A net cost calculation relies on the availability of cost data broken down according to the main drivers of costs. For example, the unit cost of providing a connection to a new subscriber in a rural area may be higher than that of an equivalent connection in an urban area. In such a situation, a net cost of the USO may rise as the USP is required to provide a service at a uniform price despite differences in the cost of provision across geo-demographic zones. For example, a subscriber connection in a rural area would generate a negative contribution. The uniform price of the service could be below the cost of providing the service in a rural area while a connection in an urban area could generate a positive contribution to the USP.

The cost information necessary for CBL to calculate the net cost of its USO would be obtained in part from CBL's cost accounting records and in part from new statistical assessments of costs. These are discussed further in these Guidelines.

1.3 Scope of these Guidelines on Application of the Methodology

In developing these Guidelines, URCA has given consideration to a methodological approach that is:

- **Based on currently available data.** This ensures that the adopted approach is practical to implement and that the methodology chosen to calculate the net USO costs will be determined by data that is largely currently available. These Guidelines provide a view on the minimum required disaggregation of the cost data.
- **Transparent.** The methodology chosen should be easily understood.
- **Easy to update and flexible.** The selected approach allows the USO net cost calculation to be updated easily as data becomes available and is sufficiently flexible to be extended to incorporate the availability of new data as CBL extends its network and service offering, if necessary, to meet its obligations under the Comms Act.

[7] In the event that the obligation to prepare separated accounts is removed from CBL whilst it continues to face a USO, URCA will provide further guidance on the cost standard to be used to estimate net USO costs.

1.4 Structure of these Guidelines

The various aspects of the methodology are discussed as follows:

- Section 2 sets out how CBL is to determine if an island is uneconomic to serve and then how to calculate the net cost of the USO of uneconomic islands.
- Section 3 sets out how CBL is to calculate the net cost of uneconomic customers on economic islands.
- Section 4 sets out how CBL is to calculate the net cost of the special tariff granted to specified institutions for the provision of internet services.
- Section 5 sets out how CBL should treat reasonable profits (i.e., cost of capital) and potential cost efficiency improvements in the calculation of the net cost of the USO.
- Section 6 sets out how to calculate the value of intangible benefits associated with the provision of the USO.
- Section 7 sets out the information that is to be provided to URCA as part of an application for funding, including information that will aid assessment as to whether an unfair financial burden exists.

2. NET COST OF UNECONOMIC ISLANDS

This Section of these Guidelines sets out how CBL is to calculate the net cost of providing universal services to uneconomic islands.

It provides guidance on how to determine:

- whether an island is uneconomic (i.e., whether meeting the USO on a given island imparts a net cost on CBL);
- the activities and network components that would not be necessary absent the USO and whose costs would be avoided; and
- the foregone revenues if CBL were to stop providing the USO services.

2.1 Analysis at Island Level

In Section 4.21 of ECS 01/2013, URCA stated that it would give further consideration to the reasonableness of an island as the unit of analysis when developing guidelines on the methodology for calculating the net cost of the USO. Having duly considered the various options, URCA is of the view that the net cost of the USO should initially be assessed at the island level. In URCA's view, this level of analysis is not only pertinent insofar as it is consistent with the presumption that an operator would make its initial decisions about entering the market at an island level, but it also reflects the technical organisation of the communications network of an operator. This takes account of the investment decisions and commercial activities of an operator that are not subject to a USO.

The calculation of net cost at this level consists of quantifying the difference between avoidable costs and the foregone revenues should CBL stop providing universal services to an island as a whole.

If the avoidable costs are larger than the foregone revenues from the provision of USO services, it is expected that CBL with full commercial freedoms would be better off not providing these services. In this situation the island is deemed to be "uneconomic".

If the foregone revenues are larger than the avoidable costs, it is expected that CBL with full commercial freedoms would be better off continuing to provide the services in question even in the absence of a USO. In this situation the island is deemed to be "economic".

Based on the results of the 2010 Census published by the Department of Statistics, URCA posits that for the purposes of these Guidelines, there are a minimum of 16 islands for which a separate net cost of the USO may be calculated provided USO services are made available on those islands. In Table 1 below, URCA lists the most populated islands in The Bahamas, together with the surface area and population density of those islands.[8] The least populated island is Ragged Island and the smallest (by surface area) is Bimini (11 sq. miles).

Table 1: Populated Islands

Island	Population	Area (sq. miles)	Population density (per square mile)
Abaco	17,224	649	26.5
Acklins Island	565	192	2.9
Andros	7,490	2,300	3.3
Berry Islands	809	12	67.3
Bimini, Cay Lobos & Cay Sal	1,988	11	180.7
Cat Island	1,522	150	10.1
Crooked Island	330	84	3.9
Eleuthera, Harbour Island & Spanish Wells	11,515	200	57.6
Exuma and Cays	6,928	112	61.9
Grand Bahama	51,368	530	96.9
Inagua Islands	913	599	1.5
Long Island	3,094	230	13.5
Mayaguana	277	110	2.5
New Providence	246,329	80	3,079.1
Ragged Island	72	14	5.1
San Salvador & Rum Cay	1,039	90	11.5

Source: The Bahamas Department of Statistics 2010 Census. http://statistics.bahamas.gov.bs/download/044192000.pdf

2.2 Avoidable Activities and Costs Absent the USO

In assessing the net cost of the USO, CBL will have to identify the activities or network elements that would not be necessary should it stop providing USO services. CBL will also have to identify those network elements that will be unavoidable as it continues to provide other (non-USO) electronic communication services on the island, such as premium TV and/or internet packages and telephony services.

The avoidable costs to be considered are those which are related to the provision of a USO TV package, and a USO internet package using CBL's network. URCA notes that the network components in CBL's separated accounts may provide a suitable level of granularity for assessing which components are likely to be avoidable.

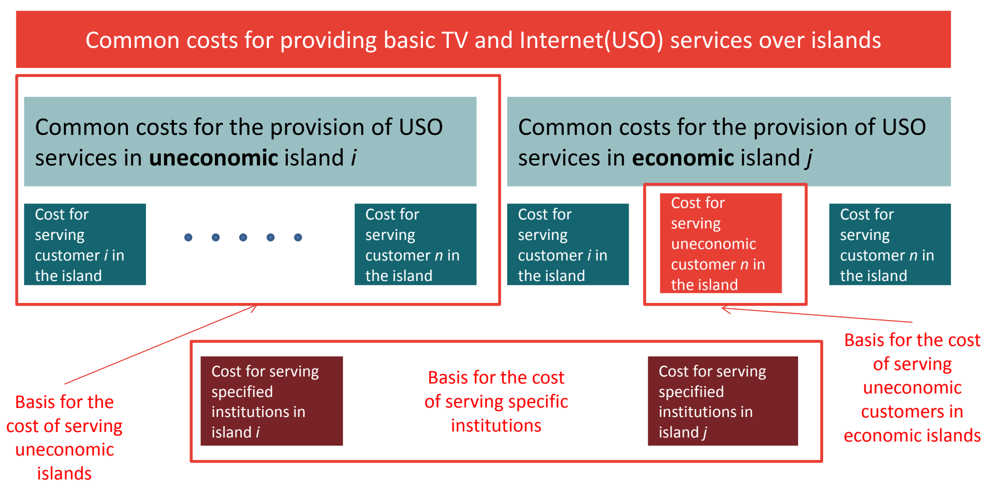
The data underlying CBL's separated accounts is likely to provide an initial foundation for assessing which costs could be avoided were CBL to no longer provide the USO services. These costs are inclusive of:

[8] Data from the national statistics also includes Spanish Wells http://statistics.bahamas.gov.bs/download/095485600.pdf.

- costs that are directly allocated to an activity and/or service can be expected to be fully avoidable;
- costs that are indirectly allocated (or are joint costs) need further scrutiny as to whether they are avoidable; and
- costs that are common should be treated as unavoidable to the extent they are common to other non-USO services the USP would continue to provide on the island absent the USO, and to the extent they do not vary with the number of customers served.

Costs that are only common to the provision of the USO services for a specific island would be treated as avoidable. Costs which are common to the provision of USO services across groups of islands that will continue to be served absent the USO, would be treated as unavoidable. This is illustrated in Figure 1.

Figure 1: Costs Considered in the Calculation of the USO Cost



Source: URCA

2.3 Avoidable Costs at Island Level

Ideally, avoidable cost data would be available at an island level from within CBL's existing separated accounting system. However, where this is not the case, CBL should consider the following two options to estimate avoidable costs:

1. CBL can undertake a geographically disaggregated cost allocation exercise for each of the main islands served by CBL and group all smaller islands together.

2. CBL can conduct a statistical analysis on the variation of costs by area within and across islands and construct the costs of an island according to the mix of areas present on each island. This option is further discussed in Sections 2.3.1 and 2.3.2 below.

2.3.1 Variations in the cost of providing access by zone

The net cost of the USO is caused by costs varying by geographical zones whilst prices are uniform.[9] Therefore, URCA will critically review the robustness of CBL's approach and the application of the approach to the determination of cost variability by zones – both of which must be documented in detail by CBL as part of any application for compensation.

CBL's assessment of the variability of costs should focus on the variability of costs in providing access. This is because the cost of providing cable access connections to a customer can vary significantly compared to the cost of services provided over these connections.

In that regard, CBL should firstly divide an island into geographical zones according to the different geo-demographic characteristics of serving customers living in those zones. This is because servicing costs may differ according to geo-demographic characteristics. In arriving at a view as to how the cost of access varies under different geo-demographic characteristics (or equivalently cost drivers), CBL should use a bottom-up cost model, or network planning data. This exercise should allow CBL to obtain a unit cost of access per zone.

Secondly, CBL should allocate its subscribers on each island to the various zones that make up the island. Thereafter CBL should derive a weighted unit average cost of access for the given island using the share of subscribers per zone as the weight.

2.3.2 Cost of providing communication services over subscriber connections

The cost of providing USO services over the cable access connections will be assumed to neither vary by zone nor by island.

2.4 Foregone Revenues Absent the USO

The revenues foregone with the removal of USO services should be calculated as the product of the charge of each USO product multiplied by their respective subscribers (excluding specified institutions) in the year. In this calculation, CBL should assume that customers continue to subscribe to their non-USO services (e.g., telephony and premium TV packages). The revenues from non-USO services would therefore not be foregone.

[9] This is only the case where overall, the average revenue is set to cover all costs.

In addition, CBL's estimate should reflect the potential for its customers to switch to non-USO products in the event that USO services are withdrawn. For example, a customer subscribing to USO TV could switch to CBL's SuperBasic package[10] upon withdrawal of CBL's USO TV package. In the event of this occurring, the withdrawal of the USO may lead to a partial rather than a full reduction in revenue for CBL. The critical assumptions for this assessment are the cross-price elasticity between USO TV and SuperBasic. URCA recognises that until USO products are established, it will not be possible to come to a view on this hypothetical switch as limited information will be available. However in the future, URCA will expect CBL to demonstrate whether an adjustment to its estimated foregone revenues is warranted.

2.5 Net Cost of the USO per Island

The net cost of the USO for an island is derived from the difference between the aggregate foregone revenues and aggregate avoidable costs in withdrawing the availability of a USO TV package and/or a USO internet package. Table 2 summarises the key components of the calculation discussed above.

Table 2: Model to Estimate the Net Cost of USO from Uneconomic Island

Avoidable costs
+ Access cost
+ Incremental costs of USO TV services
+ Incremental costs of USO internet services
Foregone revenues
- Retail revenue from USO TV services
- Retail revenue from internet services
- Retail revenue from other activities associated with the two USO packages
+ Adjustment for USO customers switching to non-USO products
= Net cost of an island

2.6 Summary of Critical Elements of Approach

The critical elements to the calculation of the net cost to uneconomic islands are:

[10] Now rebranded by CBL as "REVTV Prime".

- The variability in costs for the provision of access. This level of granularity of access cost data is necessary for any net cost calculation. In the absence of direct information on cost variability, these guidelines recommend a statistical assessment of costs.
- The variability in the quantities of services consumed by subscribers. If unavailable, an average usage for each communication service should be adopted until more relevant and appropriate data becomes available.

3. NET COST OF UNECONOMIC CUSTOMERS ON ECONOMIC ISLANDS

Uneconomic customers exist on two types of islands. First, uneconomic customers may be large in number on an island, making the island overall "uneconomic". Second, uneconomic customers may be in the minority and surrounded by economic customers, leaving the island overall economic to serve by CBL. These islands are called the "economic islands" for the purpose of these Guidelines.

This Section sets out how CBL should calculate the net cost of serving uneconomic customers on economic islands. It provides guidance on:

- the definition of uneconomic customers for the purpose of calculating the net cost of the USO; and
- the determination of both avoidable costs and foregone revenues.

The calculation of the net cost of uneconomic customers on economic islands can only be carried out after the economic and uneconomic islands have been identified (as described in Section 2 above).

3.1 Definition of Uneconomic Customers

Conceptual definition

Identifying individual customers is not required in the first stage of the calculation of the net cost of the USO (i.e., the identification of uneconomic islands in Section 2 above) since the calculation is done at island level. However, identifying uneconomic customers on an economic island requires an analysis of net cost at an individual level. This is a more involved exercise that relies on evidence of the variability in costs of providing USO TV and/or USO internet services at a high level of granularity.

URCA maintains that uneconomic customers on economic islands be defined as those who subscribe to at least one of CBL's USO services but who, through their location or other geo-demographic characteristics, cause CBL to incur higher than average service costs. CBL would therefore make a loss serving those customers (assuming the customer generates the same average revenue for CBL as other customers).[11]

In these circumstances, and assuming that CBL were able to identify such customers individually, absent the USO it would have chosen to disconnect them, having taken into account the possible negative branding impact of disconnecting these individuals.

3.2 Determining the Number of Customers who are Uneconomic to Serve

[11] The dynamic effects are dealt with as part of the intangible benefit called the "Life Cycle Effect".

Ideally, in performing the calculation of net avoidable cost for uneconomic customers, CBL should seek to identify uneconomic customers (who subscribe to at least one of CBL's USO services) individually. Where CBL is unable to do so, CBL may adopt a statistical approach to determine the set of uneconomic customers on economic islands. In the latter instance, CBL would be required to provide evidence to URCA justifying how it has identified those uneconomic customers.

Assuming average usage, a customer who subscribes to at least one of CBL's USO services may be uneconomic to serve if the costs of serving that customer are significantly above average. This could arise because:

- some network elements may be dedicated to serve a particular (uneconomic) customer; or
- some network elements for access may be used in much higher quantities for a particular customer when compared with an average customer (e.g., a customer may live further from a "node" leading to higher access network costs).

A simple way to identify uneconomic customers would be to compare the avoidable cost of serving the customer with the average revenue generated by CBL's customers who use at least one USO service. If the avoidable cost exceeds the average revenue, the customer is considered to be uneconomic. If avoidable costs can be modelled as a function of observable parameters (such as population density in the area, percentage of the area in a hilly terrain, etc.), it will be possible to identify uneconomic customers based on a set of specific parameters.

3.3 Avoidable Costs Absent the USO

The avoidable cost of specific and/or dedicated network elements shall be estimated as the product of the quantity of those network elements multiplied by their unit cost.

Avoidable costs for the provision of USO TV and USO internet services should be considered for the purpose of calculating the cost associated with the provision of uneconomic customers. In the scenario where these customers also generate revenues from non-USO services (such as digital TV, national leased lines or other services) the avoidable costs of providing those services should also be taken into account.

3.4 Foregone Revenues Absent the USO

The foregone revenues for high cost subscribers will depend on the mix of packages used by those subscribers. In the case where a high cost subscriber only uses the USO TV package, only the revenue associated with this package is foregone. If the high cost customers subscribe to USO TV as well as other non-USO services such as premium broadband or telephony then the revenues for all three products subscribed to must be included in the methodology as foregone.

3.5 Net Cost of Uneconomic Customers

The sum of the losses for all uneconomic customers will correspond to the net cost of the uneconomic customers on economic islands.

A statistical analysis of access costs is critical for this evaluation. Where CBL is not able to provide the associated evidence for differing costs of connected customers, URCA may dismiss any claim that the USO imparts a net cost on CBL as a result of serving uneconomic customers in economic areas.

4. NET COST OF SPECIAL TARIFFS TO SPECIFIED INSTITUTIONS

This Section provides guidance to CBL as to how it should calculate the net cost of providing its USO internet service for free to specified institutions (including Community Centers).

A specified institution subscribing to a USO internet service creates a *de facto* net cost for CBL. Absent this USO, CBL would serve the specified institution and charge the full monthly rate for its internet subscription.

As such, this element of the net cost calculation focuses on the revenue CBL foregoes by providing USO services for free to specified institutions. The avoidable costs associated with the actual subscriptions to the USO internet service are already taken into account in the determination of both economic and uneconomic islands.

4.1 Specified Institutions

URCA, reaffirmed in Section 4.11 of ECS 01/2013 that the following designated specified institutions (as per Schedule 5 of the Comms Act) are eligible to obtain access to USO services free of charge.

“Specified institutions” are taken to mean:

- All public and church operated schools registered with the Ministry of Education;
- Public libraries registered with the Ministry of Education;
- Public hospitals and public medical clinics registered and/or operated by the Ministry of Health and/or the Public Hospitals Authority;
- Senior citizens homes registered with the Residential Care Establishment Licensing Authority;
- Orphanages registered with the Residential Care Establishment Licensing Authority;
- Community Centers registered with URCA);
- The College of The Bahamas;
- The Bahamas Technical and Vocational Institute;
- The Bahamas Hotel Training College; and
- Eugene Dupuch Law School.

4.2 Net Cost of Special Tariffs

The net cost of special tariffs corresponds to the opportunity cost of providing internet services for free. It is given by the standard monthly charge for the internet service (as charged under the USO to other customers).

The estimated opportunity costs (i.e., revenues not earned) should then be adjusted to account for the possibility that faced with the standard tariff, specified institutions would alter and reduce their usage of internet services. Table 3 below outlines the key components that are required to estimate the net cost of providing USO internet services free of charge to specified institutions. This adjustment should be based on stated preference analysis.[12]

Table 3: Model to Estimate the Net Cost of USO from Specified Institutions (all islands combined)

Revenue foregone (calculated as follows)
- Revenue from internet, prevailing monthly flat rate multiplied by the number of specified institutions who subscribe to CBL's USO internet service + Adjusted for lower demand as subscriptions are charged at standard tariffs.
= Net cost of serving broadband internet for free to specified institutions

[12] Stated preference analysis, also called conjoint analysis, requires research participants to make a series of trade-offs. Analysis of these trade-offs will reveal the relative importance of component attributes – including price.

5. ADJUSTMENTS TO THE NET COST OF THE USO

This Section sets out the treatment of both the cost of capital and cost efficiency improvements in the net cost of the USO calculation.

5.1 Need to Adjust for Cost of Capital

The cost of capital associated with the provision of the USO is a cost that could be avoided absent the USO. It must be accounted for in the net cost calculation.

CBL is expected to set out whether the cost data used in the net cost calculation includes an allowance for the cost of capital.

To the extent that a measure of the net cost of the USO is calculated using operating avoidable cost data, the net cost would need to be augmented to account for the cost of capital for the provision of the USO.[13] CBL is expected to first identify assets used for the provision of the USO and document to what extent these would be avoided absent the USO, and then estimate the avoidable cost of capital using the applicable weighted average cost of capital (WACC) which is used by URCA in other regulatory decisions for CBL.[14]

5.2 Need to Adjust for Cost Efficiency

In its final decision on Question 24 of ECS 01/2013, URCA concluded that where the net cost is estimated using actual data, URCA may, make an efficiency adjustment to the estimate of the net cost of the USO based on any annual productivity gains the USP is set to achieve. URCA would therefore carefully consider the circumstances of each case to ascertain whether efficiency adjustments to a calculated net cost of the USO are necessary.

If an efficiency adjustment is deemed to be necessary, it will be applied once the direct net cost of the USO has been calculated.

URCA may use a number of approaches to determine the appropriate level of costs that would have been incurred by an efficient operator, in order to determine the quantum of adjustments necessary to the USP's net cost calculation. These methodologies may include, but are not limited to, the use of:

[13] For clarity, the inclusion of the cost of capital will increase the level of avoidable costs, and so islands marginally economic may become "uneconomic". Therefore, a net cost of the USO accounting for the cost of capital is expected to be higher than a net cost of the USO without such an allowance, all else being equal.

[14] http://www.urcabahamas.bs/download/075799800.pdf

- the review of CBL's business plan;
- any indicators of quality of service, for example, in relation to the speed at which access connections are provided (and as defined in the implementation plan);
- independent survey reports regarding the USP's efficiency; and
- regulatory decisions from other jurisdictions that provide relevant precedents and benchmarks.

Any efficiency adjustment will be applied *ex-post* to the overall net cost of the USO and expressed as a percentage to be taken off the net cost estimate.

6. INTANGIBLE BENEFITS

This Section sets out guidance on how CBL should calculate the value of the intangible benefits arising from the provision of the USO.

Whilst the USP may face a direct net cost of the USO, this monetary amount does not capture the potential intangible benefits arising from the USO. Such benefits if they exist enhance the overall economic performance of the USP. Hence, URCA considers that the direct net cost of the USO should be netted off against the value of intangible benefits to obtain the overall net cost of the USO.

In Section 4.25 of ECS 01/2013, URCA reaffirmed that, in principle, an adjustment for the intangible benefits to the calculation of the net cost of the USO is appropriate. A number of intangible benefits arising from the USO have been identified in the literature and regulatory decisions in other jurisdictions. URCA has chosen the following four intangible benefits that it considers to be pertinent in the context of The Bahamas:

1. Enhanced Brand Recognition/Corporate Reputation
2. Ubiquity
3. Life Cycle Effect
4. Marketing

In quantifying these, CBL should seek to answer the question as to what are the intangible benefits from serving unprofitable customers/islands at subsidised prices, rather than charging them at a price that reflects their true cost (and risk pricing them off the network).

6.1 Enhanced Brand Value

The brand image of a USP is drawn in part from the fact that it provides universal services throughout the country and customers know that they are entitled to the specific USO products upon request. From this fact, a USP may enjoy a better brand image and draw an advantage from its USO status.

Related to brand value is the notion of brand recognition.

The formalisation of the USO status of CBL is on-going. As such, customers are not yet necessarily aware that they have a right of access to the specific USO services of CBL. Therefore, URCA believes that CBL is not currently extracting any brand benefits from its USO status as such benefits are being newly acquired.

For this reason, URCA concludes that this benefit should not be considered in the determination of the net cost of the USO under the approach proposed in these Guidelines (as initially envisaged in ECS 01/ 2013).

Notwithstanding the above, this intangible benefit may become more relevant as CBL's USO status becomes more established. Hence, URCA does not discard the possibility of reconsidering its position which is subject to the development of the market and may necessitate amendments to these Guidelines.

6.2 Ubiquity

Ubiquity benefits are linked to customers who move from areas of high cost of service provision to areas with a low cost of service provision. Those customers are more likely to stay with the USP who served them in the high cost area than a new customer is likely to take a service from the USP.[15,16] Ubiquity is deemed as a benefit in that a USP faces lower acquisition costs for these moving customers than that which would be required by its rivals. The USO status makes the USP more attractive to these moving customers.

This intangible benefit only applies if full ubiquity of service is already achieved. To the extent that CBL's USO TV and internet services are not readily available across all islands, this benefit would arise only between islands currently served by CBL with USO services (and as agreed in CBL's USO implementation plan).

In order to capture the ubiquity benefits arising from this customer behaviour, CBL should estimate a per unit net contribution to profits that CBL may expect to earn as customers migrate from high cost to low cost areas currently served by CBL. In this context, high and low cost areas refer to uneconomic and economic islands.

For example, this estimate could be done by calculating the product of (A x B x C) with:

- the number of CBL customers on an uneconomic island moving to another, albeit economic, island (A);
- the probability that a CBL customer from the uneconomic island is likely to reconnect to CBL rather than choosing another provider on an economic island (B); and
- the difference in margins of providing the same electronic communications services on economic and uneconomic islands (C).

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[15] Ubiquity and life cycle effects are related. The former is about current migration from a high cost to a low cost island for a customer at a given cycle of his/her life. The latter is about the evolution of revenue spent on communications services as a customer that evolves through different cycles of his/her life. Broadly speaking, the former is about increasing contribution per line thanks to lower costs; the latter is about increasing contribution per line thanks to higher revenues.

[16] URCA does not propose at this stage to evaluate another type of ubiquity. This other type of ubiquity benefit would seek to capture the fact that some customers may have requirements covering multiple sites and prefer an operator who is present in all locations – which happens to be the case for a USP by virtue of its USO.

Two conditions are therefore necessary for the ubiquity benefit to materialise. First, the customers need to migrate from uneconomic to economic islands, and second, customers must choose the USP as a result of having been served by it previously. [17]

The first variable may be derived according to the number of customers who cancel their subscriptions because they are changing the location of their residence, adjusted for the proportion of the general population who move from uneconomic to economic islands.[18]

This variable would then be adjusted to derive an estimate of the propensity of customers to choose the same operator as before. Absent these statistics, the market share of CBL on the economic island may be used as a proxy.[19]

Regarding the third variable, the initial exercise of identifying the economic and uneconomic islands will provide information on the average revenue and average cost per island. CBL should then compare the average margin contribution for each uneconomic island with the higher margin contribution on the economic island.

6.3 Lifecycle Benefits

Lifecycle benefits refer to the fact that some customers may become more profitable in the future. When considering this lifelong perspective, such customers may become economically viable customers. This phenomenon is deemed as a potential benefit for CBL insofar as such customers remain loyal to CBL once they have become profitable to CBL. These customers may become profitable to CBL as they move away from USO subscriptions and upgrade their subscriptions to other (non-USO) services (e.g., digital TV packages, faster internet speeds and telephony).

Two conditions are therefore necessary for the lifecycle benefits to materialise. First, CBL must identify the customers who are currently unprofitable but who generate a positive net present value (NPV) over their lifetime. Second, the expected NPV of these customers must be greater if

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[17] Ubiquity intangibles may arise only when a customer moves from a high cost island (uneconomic) to a low cost island (economic). It is not considered when a customer moves from a low cost island (economic) to a high cost island (uneconomic). This is because one assumes that competitors would have chosen not to serve uneconomic islands and only the USP is present on uneconomic islands because it has a universal service obligation to be present there.

[18] For example, if 1,000 customers have cancelled their subscriptions to CBL because of a change of address, National Statistics indicate that 0.3% of population that migrate, migrate to a more prosperous island. Then at best 0.3% * 1,000 customers would be assumed to have moved to economic islands.

[19] The proxy says that if CBL holds a market share of 70% on a given island, 7 out of any 10 customers would choose CBL as they move to this island. URCA recognises that this proxy is not perfect. The implicit assumption would be that new customers on an economic island would have this (market share) propensity to stick to the USP because of its USO status. Other reasons than the USP status might explain why customers choose the same operator as before.

services are being provided whilst the customer is unprofitable to CBL (as a result of customers' increased propensity to stay with CBL).

URCA considers that this benefit is already captured in the estimated net cost of the USO. This is because the lifecycle benefits, if they exist, are largely accounted for as the analysis is carried out at the island level. For the uneconomic customers on economic islands, their average revenue is assumed to match the average revenues of all customers. This average revenue is based on the consumption of communication services by the mix of all customers – and therefore at different stages of their lives.

Therefore, URCA concludes that this benefit should not be considered in the determination of the net cost of the USO under the approach proposed in these Guidelines (as initially envisaged in ECS 01/2013).

6.4 Marketing

Marketing benefits refer to the potential use and/or commercialisation of customer usage data (e.g., profile of service mix).

The customers on whom data may be valuable are those on uneconomic islands. This dataset is deemed a USO benefit for a USP which is the single and unique provider to the uneconomic islands (i.e., absent the USO, no profit maximising operator would choose to serve this market). Hence this information has a value for future operators should they wish to market themselves to those customers/islands as they become economic thereby justifying entry into the market.

However, as indicated previously, CBL is a relatively new entrant to a market with established incumbents. Broadcasting is made available by other non-cable operators and telephony/internet services were under BTC's monopoly until the market was liberalised. In other words, uneconomic islands are not served only by CBL. Other providers can collect information on customers of those uneconomic islands for the respective markets. Therefore CBL extracts no exclusive information that their competitors cannot obtain as all operators may provide services to uneconomic islands. Furthermore, the commercialisation of consumer data to a third party is not allowed under data protection legislation in The Bahamas.[20]

On this basis, URCA concludes that this benefit should not be considered in the determination of the net cost of the USO under the approach proposed in these Guidelines (as initially envisaged in ECS 01/2013).

[20] Both the Data Protection (Privacy of Personal Information) Act, 2003 and Condition 25.6 of BTC's Individual Operating Licence (IOL) suggest that there are restrictions in reselling customer information to third parties, unless the data is collected specifically by the licensee for the purposes of commercialisation and the licensee has actively obtained the customer's consent to disclose the customer's personal information to third parties (for the purposes of the customer receiving unsolicited communications from such third parties).

7. BEYOND THE NET COST CALCULATION: NEXT STEPS

7.1 Format of Application

As previously stated in Section 1 of this document, URCA expects CBL to make its own assessment on the unfairness of the burden. That assessment must be presented to URCA as part of its application for compensation from the USF. In that regard, CBL must therefore provide its estimate of the net cost of the USO with and without intangible benefits and the net cost for the components of the USO.[21]

These overall figures must be presented to URCA with evidential support and the underpinning assumptions together with a description of the approach followed by CBL. The spreadsheet model used for the calculations is also to be provided to URCA.

URCA accepts that CBL may adopt slightly different approaches in implementation to those suggested in these Guidelines because of data availability or technical requirements. However CBL must ensure that its approaches are consistent with the principles set out in these Guidelines. The quality of CBL's documentation will be a crucial element for URCA's assessment of the robustness of these estimates. URCA may request further clarification under section 8(1) of the Comms Act and/or Condition 5.1 of CBL's Individual Operating Licence if the information provided by CBL is deemed insufficient in scope and quality. CBL may also be required to take part in meetings with URCA to provide clarification or further information in relation to its submissions.

7.2 Timing

An application for compensation for the net cost of the USO is to be submitted to URCA within six (6) months of URCA approving CBL's separated accounts for that year or within six (6) months of the publication of CBL's statutory audited accounts if separated accounts are not required under the prevailing regulations.

7.3 Unfair Financial Burden

If, after having completed its assessment of CBL's submission, URCA accepts the estimate of the net cost of the USO (inclusive of intangible benefits), URCA will then consider CBL's assessment of whether the net cost of the USO constitutes an unfair financial burden. For the avoidance of doubt, URCA will undertake its own analysis of an unfair financial burden where necessary and appropriate.

[21] Components include: Uneconomic islands, uneconomic customers, and special tariff for specified institutions.

Where such analysis is required, URCA will employ a two stage approach to the possible determination of an unfair financial burden. The first stage relates to the market share threshold at which URCA will commit to undertake an analysis of whether an unfair financial burden exists. The second stage is the actual analysis of unfair burden. The approach is discussed below.

The market share threshold for the determination of whether an unfair burden exists will be set at 80%.[22] Where the USP's market share is 80% and greater, the presumption is that no unfair burden exists. The USP would have to demonstrate to URCA that it faces an unfair burden whilst having a market share of 80% and above.

Where the USP's market share is less than 80%, URCA will assess whether an unfair burden exists. This analysis will take place if the net cost of the USO is not disproportionate to the administrative cost of running a USF. If so, URCA will look at a number of indicators.

First, the impact of a USO can, in principle, undermine the profitability of a USP or endanger its financial viability. It is relevant and necessary, therefore, to take into account whether or not a positive net cost significantly affects CBL's profitability and/or ability to earn a fair rate of return on its capital employed in the prevailing market circumstances. URCA will therefore consider how and to what extent CBL is able to achieve a fair rate of return on capital employed (ROCE).

Profitability can indicate a USP's ability to bear a USO in the short term. However, a static view of a USP's revenues and profitability may only provide a weak indicator of a USP's ability to continue paying cross-subsidy revenues into the future. In this regard, an assessment of a number of dynamic and somewhat interdependent criteria can also inform the USP's ability to sustain a positive USO net cost. Among these, URCA will consider:

- changes in prices over time;
- changes in market share and/or changes in related markets; and
- barriers to market entry.

CBL is expected to produce its own assessment against these various criteria.

[22] See URCA's final decision under Section 4.27 of ECS 01/2013.